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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,057	11/26/2001	Daniel J. Rice	24359-013	9529

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EXAMINER

PATEL, DHAIRYA A

ART UNIT PAPER NUMBER

2151

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,057

Applicant(s)

RICE ET AL.

Examiner

Dhairya A Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Application # 09/995,057 was filed on 11/28/2001. Claims 1-22 are subject to examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8,9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 8, the claim recites "...parameter indicates an amount of hours...". This is considered indefinite because it does not state how many hours exactly it just states amount of hours.

As per claim 9, the claim recites, "...parameters indicate numbers of cable-modem hours..." This is considered indefinite because it does not state how many hours exactly it just states number of cable-modem hours.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-8,10-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Feinberg et al. U.S. Patent # 6,798,745 (hereinafter Feinberg).

As per claim 1, Feinberg teaches a system for use with a broadband network, the system comprising:

- information means for obtaining information relating to network performance (column 1 lines 55-65); and

- parameter means, coupled to the information means, for parameterizing the network performance information, with parameters providing information about network performance over time (column 5 lines 28-60)

The reference teaches QoS events (network performance over time) with parameters providing information.

As per claim 2, Feinberg teaches the system of claim 1 wherein the parameters provide information about network performance in levels of network performance degradation. (Column 5 lines 17-27)

The reference teaches the network performance in which values are indicative of degradation in network performance (levels of network performance degradation)

As per claim 3, Feinberg teaches the system of claim 2 wherein the parameter means is configured to manipulate the network performance information into metrics related to network performance, and to determine the level of network performance degradation associated with each metric by comparing the metrics to thresholds associated with the levels of network performance degradation. (Column 5 lines 31-60)

The reference teaches that QoS events is packet loss, packets received, network delay, jitter etc. (metrics) which is related to network performance and comparing if the QoS acceptance value (range or threshold) associated with the QoS parameter value (network performance degradation)

As per claim 4, Feinberg teaches the system of claim 3 wherein the information means obtains substantially real-time raw network data and the parameter means manipulates the raw data and compares the manipulated raw data with thresholds that are dependent upon at least one of network performance, network configuration, computer models related to the network, and empirical evidence related to the network. (column 5 lines 23-27, lines 31-60)

The reference teaches the number of packets received out of sequence, number of packets lost, etc. (real time raw network data) and compares it with the QoS acceptable limits (threshold values) which are dependent on network performance.

As per claim 5, Feinberg teaches the system of claim 4 wherein the information means is configured to manipulate the raw data by normalizing the raw data. (column 5 lines 40-60).

The reference collecting the raw data using it to compute if it within the limits of QoS acceptable range or threshold (normalizing).

As per claim 6, Feinberg teaches the system of claim 4 wherein the parameter means is distributed within the network (column 2 lines 47-60)(column 3 lines 12-18).

As per claim 7, Feinberg teaches The system of claim 2 wherein each parameter is indicative of a length of time that the corresponding metric has been at a designated level of network degradation (column 5 lines 19-26)(column 6 lines 25-56)

As per claim 8, Feinberg teaches the system of claim 7 wherein each parameter indicates an amount of hours that the corresponding metric has been at the designated level of network performance degradation within a selected amount of time. (Column 6 lines 37-56)

As per claim 10, Feinberg teaches the system of claim 2 wherein the levels include degraded and severely degraded. (Column 5 lines 15-29) (Column 6 lines 37-56)

As per claim 11, Feinberg teaches the system of claim 1 further comprising a combiner coupled to the parameter means and configured to combine the parameters according to a topology of the network, and according to which portions of the topology are selected for evaluation (column 6 lines 16-36)

The reference teaches the when QoS parameter value for the connected network call (network) exceeds the packet network QoS threshold value (parameter) removing the fraction of the voice generated load when the packet loss was detected (combining parameters according to the network)

As per claim 12, Feinberg teaches the system of claim 1 further comprising a combiner coupled to the parameter means and configured to combine the parameters according to a time period selected for evaluation. (Column 5 lines 45-49)(Column 6 lines 16-36)

The reference teaches combining the parameters at the time period selected for evaluation in regards that parameter value was calculated was in a certain period and the monitoring was processing during a certain period therefore when the combining of the parameter for evaluation occurred during the time period as show in the expression of packet loss in function of time (column 6 lines 37-56)

As per claim 13, Feinberg teaches the system of claim 1 further comprising presentation means coupled to the parameter means and configured to present information of the parameters over time (column 6 lines 37-56).

The reference teaches the expression which will shows the present information of the parameters over time when calculated using the expression.

As per claim 14, Feinberg teaches the system of claim 1 wherein the parameter means is configured to parameterize the network performance information based upon at least one of a topology of at least a portion of the network, and a time period for evaluation (column 5 lines 28-60)

The reference teaches getting QoS performance parameter data (network performance information) based on the VoP gateway 106 to Gateway 116 (at least one of a topology of at least a portion of the network) and getting parameter value using the number of lost packets in one-second period (time period evaluation).

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As per claim 15, Feinberg teaches a computer program product comprising computer-executable instructions for causing a computer to:

-accumulate data relating to performance of broadband network elements (column 5 lines 26-39); and

The reference teaches collecting QoS events, which are packet loss; packets received out of sequence, network delay, jitter, or other performance data of the network elements.

-reduce the accumulated data relating to performance of multiple broadband network elements to a single value characterizing an aggregate amount of time that the network elements were at a corresponding quality of network performance during a designated time frame (column 5 lines 40-60).

The reference teaches the QoS events (accumulated data) are reduced to QoS parameter value (single value) by summing the packets lost in one-second period (aggregate amount of time), which is also during a designated time frame of quality of network performance.

As per claim 16, Feinberg teaches the computer program product of claim 15 further comprising instructions for causing the computer to reduce the accumulated data relating to performance of multiple broadband network elements to another single value characterizing another aggregate amount of time that the network elements were at another corresponding quality of network performance during the designated time frame (column 5 lines 27-60)

The reference teaches the QoS events (accumulated data) are reduced to QoS parameter value (single value) by summing the packets lost in one-second period (aggregate amount of time), which is also during a designated time frame of quality of network performance. The reference teaches that QoS acceptance value represents the acceptable limits (range or threshold) associated with the specified QoS parameter value which states each parameter value is going to be different each time because parameter value is determined with data is accumulated in a specified time interval therefore for another QoS parameter (single value) will be different depending on another QoS events (accumulated data) since QoS parameter value is calculated on the QoS events.

As per claim 17, Feinberg teaches the computer program product of claim 15 wherein the single value characterizes the aggregate amount of time that the network elements were at the corresponding quality of network performance for a corresponding network issue during the designated time frame (column 5 lines 40-55), the computer program product further comprising instructions for causing the computer to combine single values, for a common network issue, associated with multiple sets of network elements according to network topology into a single higher-level value of network performance(column 5 lines 40-67).

The reference teaches QoS parameter value (single value) produced during one second time period (designated time frame), which are used to compare with QoS acceptable value limits (associated w/ multiple sets of network elements) to come up with QoS acceptance or non-QoS acceptance value for the network performance.

As per claim 18, Feinberg teaches the computer program product of claim 17 further comprising instructions for causing the computer to combine a plurality of the single higher-level values according to network topology and network issue to determine a single highest value indicative of a total amount of aggregate time of network elements at the corresponding level of network performance associated with the corresponding network issue (column 5 lines 40-67)(column 6 lines 1-15).

The reference teaches QoS events which are used to obtain QoS parameter values which are single higher-level values of the network topology and network issue which corresponding to network performance associated with the corresponding network issue such as dropped packets, network delay, etc.

As per claim 19, Feinberg teaches the computer program product of claim 17 further comprising instructions for causing the computer to combine a plurality of highest values corresponding to network issues into a single summary value indicative of a total amount of aggregate time of all network elements at the corresponding level of network performance, in at least a desired portion of network (column 5 lines 27-67)(column 6 lines 1-15).

The reference teaches QoS events which are used to obtain QoS parameter values which are single higher-level values of the network topology and network issue which corresponding to network performance in desired portion of network because in this case the single value determined is between VoP gateway 106 to gateway 116 (desired portion of network).

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As per claim 20, Feinberg teaches the computer program product of claim 15 wherein the instructions for causing the computer to reduce the accumulated data weights different accumulated data differently to determine the single value. (Column 5 lines 45-60)

The reference teaches that QoS acceptance value represents the acceptable limits (range or threshold) associated with the specified QoS parameter value which states each parameter value is going to be different each time because parameter value is determined with data is accumulated in a specified time interval therefore to reduce the accumulated data weights different accumulated data differently each time.

As per claim 21, Feinberg teaches the computer program product of claim 15 wherein the instructions for causing the computer to accumulate data causes the computer to gather raw data from an associated broadband network. (Column 5 lines 36-49)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feinberg et al. U.S. Patent # 6,798,745 in view of Dziekan et al. U.S. Patent 6,704,288 (hereinafter Dziekan).

As per claim 9, Fienberg teaches the system of claim 8 but is silent on teaching the network is a DOCSIS network including cable modems and cable modem termination systems, and the parameters indicate numbers of cable-modem hours at the designated levels of network degradation. Dziekan teaches the network is a DOCSIS network including cable modems and cable modem termination systems, and the parameters indicate numbers of cable-modem hours at the designated levels of network degradation. (Column 1 lines 31-53). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Feinberg's invention in Dziekan's invention to come up with DOCSIS network which cable modems and cable modem termination system to indicate number of cable modem hours. The motivation for doing so would have been to know the speed of transmission at the time of degradation or how much the degradation is lowering by.

As per claim 22, Feinberg teaches the computer program product of claim 21 wherein the instructions for causing the computer to accumulate data but is silent on teaching causes the computer to analyze but is silent on teaching MIB objects provided by DOCSIS network elements. Dziekan teaches MIB objects provided by DOCSIS network (column 4 lines 31-35) (column 1 lines 51-53). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Feinberg's invention in Dziekan's invention to come up MIB objects provided by DOCSIS network. The motivation for doing so would have been to receive reports of the network elements failures.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A). "Quality of service Management for voice over packet networks" by Feinberg et al. U.S. Patent # 6,798,745

B). "Arrangement for discovering the topology of an HFC access network" by Dziekan et al. U.S. Patent # 6,704,288

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the applicant (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dhairya A Patel whose telephone number is (571) 272-4066. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAP


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER